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- *Door sounds: 2292 - 2341*
- *Kirk and shoelaces*
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USS ENTERPRISE NCC 1701-D: Lavatories

Jokes about the Captain's log aside, toilets aboard the Enterprise D are at the cutting edge of Starfleet technology. The traditional bowl design maintained on previous starships has been replaced in all Galaxy-class vessels by a waste removal unit that puts transporter technology to a new and innovative use.

Uniforms stay put

The Enterprise D's toilets work by transporting human waste out of their bodies to the ship's **Central Matter Container**, where it is stored for eventual reprocessing into Klingon delicacies for the **food replicators**. Thanks to transporter accuracy, crew members no longer have to remove clothing in order to relieve themselves, so the old association of privacy is long forgotten. In fact, Excretion Removal Units (ERUs) can be built into almost any chair - including those at workstations - and programmed to remove waste as and when necessary, without any bystanders knowing that the process is in operation. The incorporation of such chairs into the Enterprise D's **main bridge** has resulted in a marked reduction in distracting odours known to occur when, for example, a Romulan Warbird drops out of hyperspace with its weapons targeted on your ship's warp core.

Early problems

Developed at the lavatory laboratory at Utopia Fleet Yards on Mars, the ERU was not an immediate success. Early versions, designed specifically for humans, failed to carry a warning notice and there are many stories of non-human personnel or visiting dignitaries losing their lower intestines after sitting on what looked to them like a comfortable seat. Modern ERUs are adapted for all known anatomies, however great care still has to be taken in the seating arrangements for any first contact meetings with a new species.

Klingon comforts

Least appreciative of the ERU are **Klingons**. Klingons, who have 37 different words to describe a bowel movement, feel that the ERU robs the process of its honour and refuse to make use of the technology. This has led to the development of **Klingon Flatulence Compensators** (KFCs) for use in situations where Starfleet personnel are required to work alongside their Klingon counterparts. Even **Worf**, the Klingon posted on the Enterprise D, has been known to protest strongly against the ubiquity of ERUs on the ship, stating on more than one occasion, "A Klingon considers that a P'Ta [good dump] should be a challenging and character building experience," (TNG: Retention), and "The TorPChi [fart] is a most effective weapon in the Klingon warrior's close combat armoury," (DS9: Easy does it).

Developing technology

Nonetheless, the ERU has been rated the most popular new invention since the **holodeck doorlock** and is set to be developed into yet more areas of personal hygiene and sanitation. Proposals on the drawing board include manicure, hair styling and nose dirt removal subroutines. It has also been suggested by the Vulcans that a modified ERU could serve as a highly efficient replacement for the mating process, but, surprisingly, it wasn't just the Klingons that protested against that one.

The ERU has turned excretion into a convenient, dignified and painless process. Whilst its history has not been without complications it looks set to remain an essential part of a starship's equipment compliment for many years to come.

Other cards in this file:

Operation of the ERU in a shipwide power failure

Bowel re-training for undercover operatives in ERU-free environments

How to re-program ERU waste destinations, or 'The turd in the Captain's chair' scenario

edit

2002: IIRC

2002 has been a good year for Spectrum fans - fitting since it's been the 20th anniversary of Sir Clive's much-loved machine. We've seen the emulation scene taken to a whole new level with such innovative releases as SPIN, Klive, Es.pectrum and Spectaculator; we have a brand new ROM to play with in Andrew Owen's SE BASIC - now very close to completion (and let's not forget Geoff Wearmouth's 'SeaChange' ROM, which *is* now complete); we've seen new PC utilities released (eg, SevenuP); we've seen new hardware concepts evolve (eg, the ZXSE). In the meantime, the resources we're all familiar with have continued to exapnd and evolve. WOS, for example, has a new chat room service to compliment its increasingly popular discussion forum. Is there no end to this site's capacity? The recent decision to host the *entire* collection of CRASH issue recently scanned by Stephen Stuttard would suggest not.

Furthermore, 2002 appears to have been a year in which retro-computing has taken large steps towards mainstream culture. Shaun bebbington's now regular retro slot in the weekly Micro Mart springs immediately to mind, as does Amstrad's 'e-mailerplus' telephone/email system, with its built-in Spectrum games compatibility. Perhaps more significant still are magazine releases such as 'games™' - issue one of which dedicated over 25 pages to retro material. And is it just me, or do there appear to be more and more 'newbies' announcing themselves to comp.sys.sinclair these days. Certainly the price of Spectrums on ebay - and they're hardly in short supply - would seem to indicate that there are plenty of people out there who want to own a Spectrum. Are these all just 'investors'? Personally I hope the answer to this question is 'no'. I hope that at least some of these buyers are plugging their prizes into TVs and playing games and writing BASIC, just like they used to. And I hope they're showing all this to their kids and letting them experiment too. After all, when the Spectrum hits its 100th anniversary in 80 years time we want somebody around then to at least acknowledge this, don't we?

And, naturally, I hope also that many of you will consider ZXF to have been a good thing to have happened to the Spectrum scene in 2002. This issue in particular has seen the greatest amount of collaboration in it's (brief) history so far, which is exactly what I'd hoped for when planning issue 1. I've learnt over the past few months that the best way to get people to contribute is to ask them directly, so I'll be doing a bit more of that in the coming year.

From this point onwards, ZXF will be relaxing its publishing shedule to three issues per year, so you can expect to see ZXF04 (material for which is already being accumulated) in April. I feel I've put a lot into getting this ball rolling over the last 6 months and would like to establish now a regular routine that is both sustainable for me and gives everyone who wishes to a fair chance to contribute.

And so to 2003 - what will await us there? For now, at least, if you're celebrating a festival this season, I hope it is a peaceful one. On the subject of peace, we might not be so lucky next year: read the story of 'Warajevo' and you will be reminded that those drawn into distant wars are not so dissimilar to us as we might sometimes find ourselves assuming.

Until next time.

Colin Woodcock

mail@cwoodcock.co.uk

Well, what do you think, after this story, about today MS Windows programs that require 100 Mb for relative simple task??? Obviously, the Spectrum times were the best computer times. Nowadays, for playing a game in a PC you need a Pentium 200 MHz, 32 Mb of RAM and a fast graphic card. If you haven't got these requirements, you can`t play the game. But, with the Spectrum everything was quite different. The Spectrum wasn't upgradeable and the programmers had to make big efforts to develope a very good game. And the games were also cheaper than the PC ones...

Between April 1995 and December 1997 we received E-MAIL messages from 28 countries, from all 6 continents (Argentina, Australia, Austria, Canada, Czech, Croatia, Danish, France, Germany, Great Britain, Netherlands, Hungary, India, Italy, Latvia, Macedonia, Norway, Portugal, Romania, Russia, Slovakia, Slovenia, South Africa, Spain, Sweden, USA, Uruguay, Yugoslavia), with greetings, questions, new ideas and bug remarks. We apologise if any message remain unanswered because E-MAIL in Sarajevo is still sometimes unstable so it doesn't work from time to time.

IF YOU LIKE THE WARAJEVO EMULATOR, AND IF YOU ARE FROM A COUNTRY NOT LISTED ABOVE, PLEASE SEND AN E-MAIL TO US!!!

Retro Computer Mart

8-bit computing is alive and well in the mainstream press, thanks to Shaun Bebbington, whose weekly column in Micro Mart covers all the latest developments in the retro computing world. Here Shaun describes how he brought the Spectrum and its peers back to the pages of something you can browse in WHSmith.

Nine years ago now. I had recently left school and started work. It was late spring, and I found myself in my local newsagents. There I was, and for the first time in a long time I was by the magazine section. There I saw Your Sinclair and more importantly Commodore Force. Obviously, being a Commodore enthusiast it was Commodore Force that interested me. I purchased 2 copies of issue 7, and the last 2 issues of YS. From then on, I would buy Commodore Scene until its final issue.

Time passed. I worked, then started college to start a part time job, and in 1994 I purchased a Commodore 64c, a machine that would serve me well. I also purchased a Spectrum 48k, which died. However, in May 1994 something changed. Commodore Format, the final commercial Commodore publication for the UK had become sparse of new developments, that is until the April issue when they had a preview of Penguin Towers. New software for the Commodore! Obviously, this helped to fill a few pages, and spark something as the next issue contained news of twenty-six new software developments and (for the first time that year) four new games reviewed! Slowly, news came through of hardware upgrades for the Commodore 64 and 128, 4GB hard drives, dedicated intelligent mice, 3.5" disk drives, ram expansions upto 16mb and more. It seemed the Commodore 64's revival had turned into a revolution. Unfortunately, poor sales led to higher prices. An unbreakable circle - the UK importer needed a mass order to bring the price down, but because of the initial price there was no mass order forthcoming! Despite this, GEOS (Graphical Environment Operating System) was a limited sucess some time after.

Why do you need to know all of this? This is, after all a Sinclair publication... Now to my point.

zx-spectrum.wz.cz/ and you can also download the software - of course - from WOS at **www.worldofspectrum.org/ utilities.html**.

And, on the subject of graphics, **Jamie Tejedor Gómez** (aka Metalbrain) has just released version 0.71 of his rather splendid **SevenuP** editor, which you can get from **www.speccy.org/metalbrain.**

ZX Digest

is the name of a new Spectrum magazine edited by Andy Ryals. At a cost of just €10 or £5 (and that can barely cover the postage, can it?) a subscription will get you 3 colour issues of the mag plus a CD-ROM of all the latest spectrum games/utils/etc from 2000 onwards. Subscrbers also get emailed newsletter and CD-ROM updates. More information is available from Andy's website at **www.zxdigest.dsl.pipex.com/**

Chloe comes home

The concept of the 'SuperSpectrum,' it would appear, is far from dead. Whilst images of a marzipan covered **Loki** might have been the closest we ever got in the 80s (barring - ok - the SAM Coupé), today's hobbyists have not yet given up on the idea. **Mike Wynne** has been working on his **SpeccyBob** project for some time now (**www.speccybob.2y.net**), the Lite version being a Spectrum facsimilie you can pretty much build from off-the-shelf components (yes - even the ULA); the 'full' version, however (some way from completion yet, I gather) promises much more, including selection video modes, IDE interface, and up to 4Mb RAM.

But applause of the moment is due to Andrew Owen, whose **ZX Spectrum SE** (ZXSE) machine - a modified Timex Portugal TC2048 - got its smack on the backside and first real lungfulls of air in October, mere days after ZXF02 'went to press'. You can read more about this in this issue's **int** section.

But it ends not there. Sami Vehmaa, creator of the **ZXATASP** IDE interfaces reported on last issue has now published his own plans for a **Spectrum +5**, which will feature such goodies as a considerable amount of memory and Compact Flash card support.

CSS FAQ under review

The bible of **comp.sys.sinclair** is to be reviewed, if you hadn't heard already. To do this the CSS FAQ Maintenance Team need your feedback on what must be one of the most comprehensive FAQs on the net already. The following questions have been issued for you to answer - in as much or as little detail as you desire - and then post off to **cssfaq@worldofspectrum.org** (please include with this information also your browser type and version).

1) As a *general rule*, do you find the current content of the FAQ to be accurate?

2) Do you find the current style and layout of the FAQ adequate, or would you prefer a new design?

3) Do you use the Offline version of the FAQ? Should the Offline version be "plain", with an enhanced version (same content) available Online?

4) Which sections of the FAQ do you find most useful, most of the time?

5) Which sections of the FAQ do you feel are unnecessary, or need significant work to become useful?

6) Would you prefer that a smaller, completely overhauled FAQ be released initially, with existing and updated/expanded content progressively added as it is verified?

If so, which sections do you believe are most important to have available immediately?

7) Are commonly used peripherals (Interface I, Interface II, ZX Printer, ZX Microdrives, Kempston Joystick/Printer interfaces, etc. etc.) adequately covered, or should more information be included with links where necessary to external resources?

8) Are non-Sinclair/Amstrad machines adequately covered (Timex variants, etc.) ?

9) Should a more distinct section be created and maintained for current developments (SE

Maybe this program is not too interesting in itself, but it is a fact that this program comes from Bosnia and Herzegovina, from the city of Sarajevo which has been surrounded for more than three years. After reading this story, you will understand why this emulator has such strange name "Warajevo"...

Even in our secondary school days, about ten years before, we began to build an interest in computers thanks to the ZX Spectrum. For this reason, we are a bit sentimentally tied with this computer. This computer reminds us of all of the times when, in our neighbourhoods, the life was nice and normal.

When we bought AT 286 computers at the end of 1990, we did not forget our Spectrums however. We had great interest when, in June 1991, we got a Spectrum emulator, which, without underestimating anybody's work, had very bad characteristics (it was slow, quite incompatible with the original machine, with unpractical emulation of the tape recorder etc.). It's origin is unknown to us (we suppose, in according to some newspapers, that the program is from the Slovenia Republic, and that the author is Peter Kroselj), and when starting it displays the copyright message '(C)1991. Roman & easy inc.'. When the war started in our country, we wanted to remove the dark thoughts from our heads as much as possible. So, in April 1993, we started the development of our Spectrum emulator, symbolically called 'WarajevoSpectrum emulator' which should have much better characteristics. We should mention that we were known as quite good programmers, especially in assembly language.

The program was developed in horrible conditions. The grenades fell everywhere.

The program was developed in horrible conditions. The grenades fell everywhere, there was little electrical power (at one time even the hospitals didn't have power for two months!). When we had electricity it was only for 2-3 hours during the night. However, we did not quit and caught every moment when the electricity was on to develop the program. Zeljko worked at home on his 80286/12 MHz, 1.44" floppy, 40 Mb hard disc, Hercules card and Citizen 180D printer. He used TASM assembler. It was very interesting waiting for days of electricity. Samir worked mainly in army camp barack on 80286/16 MHz, 5,25" + 1.44" floppy, 2400 bps modem, VGA mono monitor, WITHOUT HARD DISC because it crashed. The power generator in the army camp was an improvised generator, with a voltage that varied from 150 V to 300 V! It was in fact car engine without carburator, connected to natural gas pipeline. This car engine was tied with shunted electromotor giving about 30 kW for 100 rooms.

It was often situation that when one user switch caffe aparat on, Samir's computer resets itself. UPS? What is this??? As you can expect, such 'stable' voltage distroyed Samir's hard disc...

Zeljko's task was mainly writting of the emulator kernel, and Samir's task was to write conversion and tape file utilities. So, he used Turbo Pascal 5.5. First version of such utility was called ZXTOOLS, and existed up to release 1.5. In this situation, we decided that our tape file format will be compressed, as we had not enough diskettes, nor we belived that we will ever have money for puchasing bigger hard disc.

As Zeljko has real Spectrum 128, we made cable for transfering Spectrum software using RS232. During times when we was free of army activities, Samir visited the last Spectrum software pirate in Sarajevo and borrowed casettes. But, this pirate was located in one of the most dangerous places in the city, practically on the first front line. He had to use a river bed (instead of streets) for moving, to skip continous sniper's fire. So, Samir risked his life to bring up Spectrum software! Later he transfered programs using RS232, mainly in the army camp.

The summer of 1993 was the worst period during the whole Bosnian war, 1 kg of sugar had price of even 60 DM, and about 3000-4000 grenades fall every day on the town. This was a period when only miracle saved Sarajevo of fall. However, we progressed very well...

Zeljko catched every second of presence of electrical power to finish the emulator kernel, and Samir hed not even leave the army building during this period. While he waited for a new

CRASH on CD to buy

Stephen Stuttard has been a very busy bod. Oh yes. Over the last six months or so he's scanned every last issue of Newsfield's **CRASH** magazine - my own personal favourite of the Spectrum magazines - and burned them onto 5 CDs for you and I to buy for less than the cost of the work he's put into this. Yes, you heard me right - *every* page of *every* issue. He's even thrown in sample issues of other Newsfield mags (**ZZap!64**, **Amtix**, etc; even the special preview copy of **LM** given away with CRASH 36, although no copies of **FEAR**) and other Spectrum mags (**Your Sinclair** and **Sinclair User**). And - yes - the set also includes the infamous recalled issue 19, complete with the offending Sinclair User parody, *Unclear User* (it's actually not all that funny).

Stephen's a bit of a die-hard fan of the Newsfield publications, having already performed this monstrous feet of endurance for the entire ZZap!64 collection as well as participating in the ZZap!64 issue 107 project (a brand new issue of the Commodore magazine). The especially good news is that he's now thinking of converting some of the other Spectrum titles, such as YS.

The CRASH CDs contain all 98 issues of the magazine, with issues 1-20 covered on CD1, 21-40 on CD2, 41-60 on CD3, 61-80 on CD4 and 81-98 on CD5. What you get is very straightforward - each issue has its own directory with each page stored there in JPEG format (and, in the rather unlikely event that you don't have a graphics program capable of viewing JPEG images, one has been provided for you on CD1). Each CD also has a number of extra features: the other magazine scans mentioned earlier, for example; the **Jetman**, **Tamara Knight**, **Terminal Man**, etc, sagas all gathered together into their own directories for easy viewing; a special directory with scans showing how the computing press covered the collapse of Newsfield; and so on. And did I mention that every single covertape has also been included? All this will set you back a mere £20.

In case you hadn't noticed, I'm rather impressed by this piece of work. If, like me, you threw out your entire CRASH collection years ago when, shiny new 286 on your desk, you decided the Spectrum to be a thing of the past; if, like me, you cannot face the horror of what a replacement set via **ebay** might end up costing; if, like me, you fear divorce proceedings would be an inevitability if you ever did get hold of a replacement set, then this collection of CDs will be a blessing from the heavens above.

If you want to get your hands on a set, mail Stephen at **sstuttard@yahoo.co.uk** and he'll then let you know the address to send your cheque to.

And if £20 is a bit of a stretch at the moment, what with crimbo here to see every last penny out of your pocket, you'll be delighted to know that Martijn van der Heide will be hosting **the entire collection** at WOS (see **ftp://ftp.worldofspectrum.org/pub/sinclair/magazines/Crash/**). But use this resource sensibly or it'll soon be gone (as was the case when Stephen tried to web-publish his ZZap!64 scans, in fact). If you want the whole lot, buy the CDs.

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Emulator news

VBSPEC

Another update for **vbSpec**, Chris Cowley's 100 per cent Visual Basic Spectrum emulator. Version 1.60 has set out in new directions, adding in support for the ZX Printer and also for the Kempston Mouse. The ZX Printer, as we shall see, seems to be the new darling of the emulators, stepping up to take the place of the Currah Micro Speech (see last issue). In the view of this humble commentator, this has not happened a moment too soon. I like the ZX Printer. A lot.

vbSpec's implementation of Sinclair's printer outputs the... erm... output as a graphic in a separate window, line by line, black 'ink' on grey (silver) paper - just like it was in the old days (but without the grinding noise); there's even a handy little form feed button on the window to advance the paper with. And when you're done you can save your output as a BMP file and clear the roll to start again. So if you're after a text output to feed into a word processor, you will be disappointed (although I suppose you could always try putting the bitmap file through an OCR program), but then **RealSpectrum** has supported printing to a file for some time now for that job. No, the ZX Printer is there for one reason and one reason only: it looks cool. As a final touch there's even the option to toggle between ZX Printer output and Alphacom 32 output (the latter being blue text on a white background rather than black on a silver background).

A further addition to vbSpec is support for Andrew Owen's Sinclair SE BASIC, which can be switched on from the General Settings option in the Options menu. This will work with all models of Spectrum emulated and the ROM file itself is included in the download, making this probably the most painless way about at the moment to get going with this new BASIC (The version of SE BASIC included is 0.93e, however, which does not include working ZX Printer support, so to get everything working together you'll either have to wait for version 1.0 of SE BASIC or get hold of an earlier version of the ROM in which Printer support worked).

Finally, something I should have mentioned previously is that vbSpec has supported the Timex TC2048 since version 1.30, giving you the possibility of playing around with those extra graphic modes that the Spectrum never got to see. Once again, select this from the General Settings option in the Options menu.

http://freestuff.grok.co.uk/vbspec/

SPIN

Strange and mysterious; SPIN's main new feature (version 0.4; a 0.41 bug fix has since been released) is also ZX Printer emulation, however the idea just ocurred to co-author Paul Dunn - and at around about the same time as it did to Chris Cowley. No collaboration here, just plain old coincidence, although I suspect that the added Kempston mouse support (also a new feature of vbSpec) and support for SE BASIC stretches the coincidence a little too far...

Whatever. SPIN's implementation of the line printer does not include vbSpec's Alphacom 32 button (hardly a difficult feature to add, I suppose) or its form feed button; other than that there's not much to choose between this and vbSpec on this front.

On the issue of the Kempston mouse, there are a few programs availible which support this, I understand; I have an incomplete knowledge of these (anyone who would like to provide a list would be very welcome). Xcellent Software's **The Artisit** is reported to,

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The **ULTIMATE** wordsearch

14 games to find...

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wibble

Send your letters to mail@cwoodcock.co.uk, with 'ZXF letter' in the subject line.

I've nothing to complain about this issue! First, some feedback the article on making a loading screen that featured in the last issue of ZXF. Thanks everyone.

Man, I´ve read the latest ZXF Issue, and it is great, just one information:

BMP2SCR has a build in Screen Editor too. Okay, it is not so complex like 7up, but it is good for touch up these little nasty attribute overflows. You can even convert the SCR to TAP from the viewer (Yesss, it is true) :).

The screen editor is a less known piece of BMP2SCR, even some friends in Germany were surprised as I show it to them, that is because nobody reads instructions...

To access it, just go to the SCR Viewer (First option after loading), then load a screen and press "p" for Paint.

I know, that this is a bit complicated, but the BMP2SCR Adv. version 2.00 will be fully redesigned and will also have a better access to this screen editor.

Greetings

LCD - Leszek Chmielewski

Although the method you detail in issue 2 of ZXF does convert images to Spectrum screens, I prefer using bmp2spec with the GIMP to convert images as I think it generates better images on the Spectrum.

I've written a small tutorial on how I used this to create the loading screen for Top Shelf Challenge 3 for the CSSCGC 2002 and put it on my website. You can find it here: **http://rivet.50megs.com/bmp2spectut/bmp2spectut.html**

Great mag by the way.

Cheers,

Derek Jolly

Firstly, I must congratulate you on another excellent issue of ZXF, and I look forward to the next one.

Secondly, as the BMP to SCREEN$ article focused on a method of creating Spectrum screen images on a Windows PC, I wanted to give my two Rolos and very quickly run through how to achieve a similar effect on the Amiga (WB3+):

1. Find your picture, it doesn't matter which size it is or which format it is in as long as you have a Datatype which will read it. For best results make sure it has approximately the right aspect ratio, and seriously boost the colour and contrast with PPaint.

2. Using PDHFIC (**www.unsatisfactorysoftware.co.uk/ppmtoscr**/) load the picture in and set the output format to TAP. Select the destination filename and then click on "Convert!". It is often better to set the output format to SCR initially because the resulting image can be checked in Multiview with the SCR datatype. When you are happy it looks OK, swizzle the format back to TAP, or load the slightly dodgy SCR into PPaint to clean it up and then run it back through PDHFIC to reconvert it.

3. Erm, that's it. If you save the loader and main program code as separate TAP files (ZXAM saves TAPs), these can be joined together easily with the JOIN command (eg. join loader.tap screen.tap code.tap as program.tap) to create the full tape image.

Hope this is of some use to your readers.

Chris

I want to thank you your efforts doing the ZXF magazine, one of the few new things maded for our beloved Spectrum. It's really good, and it has very usefull sections, like the instructions to made a SCART adapter for the +2a/+3.

But I've written to you to make you a little correction: In page 7, you speak about my

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table of measurements and instructions. "Be with you in a tick," the program advises as it does its calculations.

Informal language and entertaining sonic and visual feedback were quite common in utility programs of the 1980s, when home computing was new and users were more willingly amused (and more easily intimidated!) by the software they bought. Clippit, the dancing paperclip assistant who was recently ditched by the Microsoft Office team, was not by any means the first animated annoyance in a utility program.

Computer Cookery (1984) rewards incorrect keypresses with cheeky error messages - including "Cosmic colanders! You have got it wrong!" and "Press the right key or I'll have to sue!" - along with a crazy zapping noise that would be more at home in a shoot-'em-up game. On the other hand, if *you* behave then the program will behave, serving up recipes in imperial or metric for a specified number of guests. It even adds accented characters to the Sinclair font: fancy some Chicken Sauté Bercy or Duck à l'Orange?

If you're thinking that no modern program could be so flippant, have a look at **Prime Number Generator** (2001). It offers six options, including Prime Factorisation, Goldbach Conjecture, and Do Something Less Sad (also known as Quit). The scrolling message is even better: "This program should never have been written in BASIC and employs no clever algorithms to make it faster."

Kids can have utilities, too. **My Secret File** (1984) is a "do-it-yourself dossier for your darkest thoughts", based on the Puffin book by children's illustrator John Astrop. A very blocky spy requests your password before allowing you to view and edit such confidential documents as My Favourite Relations and Ten Descriptions of Mum. Aw, bless.

The Real You (year unknown) is a pointer-driven multiload that analyses your views, personality, and love life based on your responses to a number of quizzes. Am I a high-tech person? That depends. "Have you ever felt anxious about the TV exploding?" "Do you own a battery-driven pepper mill?" Wade through enough of these questions and you are presented with a mystifying bar graph.

If you'd rather measure your intellect than your anxiety levels, you might prefer the **Cattell IIIA Intelligence Tests** (year unknown). Endorsed by Professor Cattell himself, this program puts you through a multiple-choice marathon designed to gauge your mental aptitude. The interface is very slick for its time. Did I mention the time limit?

Moving from the general to the specialised: **Audio Frequency Generator** (1989) produces sixty seconds of pure tone at any of six frequencies, just like it says on the tin, while Wizard Prang's Headache Mantra (year unknown) is a sound-and-fury routine for use in your own BASIC programs. You can try it out by guiding a hapless figure under a falling object.

But the Golden Solar-Powered Torch award - for forgetting that 'utility' means 'usefulness' - must go to **Car Seating Arrangement Designer** (1991), "a seating arrangement compiler for the Renault Espace". Enter the names of up to five passengers, and the computer randomly decides who gets which seat. It's guaranteed to settle your Espace seating squabbles forever, and to top it all there's a three-channel musical introduction.

The utility that brings back memories for me is **Superfile 128**. It was bundled with the Spectrum +2 as a token database program, and my sister and I used to play with it when we were nine and seven years old. We'd go through all the menu options, change the system colours, and invent meanings for mysterious terms like 'microdrive' and 'transaction'. It's a good thing we didn't have Activision's Hacker 2, or we'd really have thought we were onto something.

Find Spectrum utilities online at www.worldofspectrum.org/utils/

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If it were possible to crown someone *Defender of the Spectrum Flame* then the first of this issue's interviewees would be the logical current candidate for the title. His website, *The World of Spectrum* has won awards from around the globe; it is almost certainly the largest, most comprehensive and most well organised site of its type anywhere on the planet. And unlike many other sites, it just continues to grow and develop on an almost daily basis. In many ways, WOS encompases all that the Internet should be - and how wonderful it is that the inspiration for all this should be our favourite 8-bit micro.

Ladies and gentlemen, please be upstanding for...

Martijn van der Heide

First off, I have to express my sincere admiration and gratitude for The World of Spectrum. It is an awesome achievement; a site few others on the web (and we're talking all sites here, not just Spectrum sites) can measure up to in so many aspects - its size, its breadth, its longevity: your ongoing commitment to its development is astonishing.

blush

Just how long has WOS been going for now and what did it look like when you started?

WoS started on 30 November 1995 (so we're up for our 7th birthday soon!), just as a single page to host my database program SGD. I don't have a copy of it anymore, unfortunately... even the What's New archive doesn't go back further than 1997. All I recall is that it had a medium blue background.

It very soon got some other bits on it, such as a links list and I believe some emulators - all on the same single page. As this was my first own page and the WWW was relatively new itself, it was riddled with animated GIFs and javascript rubbish. Pretty much the standard page everyone made in their life when joining the Internet :-) It must have been running the original NCSA httpd server on a Sun Sparc 5 running Solaris 2.4. I ran night shifts in the NOC at Getronics at that time and was merely investigating this thing called webhosting, which was new and scary at that time.

Games downloads didn't appear before the first week of January 1997. See my original message in comp.sys.sinclair for its announcement (opposite).

Until that time, I scoured the 'net for downloads to get as many games catalogued as possible. This was all done in those dreaded night shifts - I used to download some 3 floppy disks worth per shift and would sort these as soon as I got home, before going to sleep. The entire NVG archive was thus 'taken care of', which is how I got in touch with Lee Tonks (Blood), its maintainer at that time. He also took care of my SGD updates on NVG.

Where did the passion come from that drove all this work?

Originally it was the Spectrum itself, the

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play the games and submit the input recordings they made whilst doing so; it's a fair, reasonably non-corruptable, way of ensuring everybody is competing on a level playing field and that nobody can pass off grossly exaggerated figures as their own high score. It also allows players to learn from others' successes.

The two input recording file formats in use are .AIR and .RZX, with the latter introduced as the successor to the former. The problem with AIR files was that they could only be played back on the emulator which created them: this meant in the past that all competitors in games tournaments had to use the same emulator (usually **RealSpectrum**); even if your own preferred emulator supported AIR file recording, one created by another emulator would not work (you were even more excluded if you used a different platform, such as RiscOs, where a RealSpectrum AIR file - for example - would then become completely inaccessible because the emulator is not available for that platform). RZX, on the other hand, works across emulators, so all programs which support this format (regardless of their platform) should be able to run any RZX file created by any emulator (so an RZX file created with RealSpectrum should play back equally well on SPIN for Windows or Philip Kendall's **Fuse** for Unix).

Audio/Video

Input recording is fine if you want to show off to friends with a Spectrum emulator, but it is just possible, of course, that you might want something portable that can play on a computer without such software installed. .AVI and .WAV files are - as you are no doubt already aware - standard Windows formats for video and audio respectively, and both are supported by RealSpectrum (the most comprehensive of the Spectrum emulators - for the moment, at least). They're certainly not the most efficient of file formats for these purposes - not by a very long stretch - but an advantage of recording in these formats is that the files created will play on much older PCs than the current 'standard.' And you could always use additional tools to convert them into - say - MPG/MP3 files; conceivably you could even encode and burn video onto a DVD if you so desired and watch it on your TV (there's full circle for you) - so then the recipient of your recording wouldn't even have to own a computer, let alone a Spectrum emulator.

Graphics

If all that sounds a bit too exotic for your needs, there are, of course, options on most emulators to create standard Windows graphics files. Quite a number allow you to save screenshots as .BMP (Windows bitmap) files - and have done for some time - for editing in a standard graphics package (where you could convert to - say - GIF format for publication on a web page) and just recently BMP export has also been created for the **ZX Printer**, so you can now print from your emulated Spectrum to an emulated ZX Printer and save the printer's output as a BMP file.

And what about doing it the other way around - wouldn't it be cool to turn a Windows BMP into a Spectrum screen? **Z80**, the shareware Spectrum emulator by **Gerton Lunter**, has offered a BMP import feature for several years now, although the control this option offers you is quite limited. A much better way is using the .SCR file format - essentially a graphics format for Spectrum screens that is supported by most emlators today. SCRs cannot be edited by standard Windows graphics packages, but there are a whole host of freeware programs that can - and these will also convert bitmaps into SCRs for you (see last issue's tutorial on creating a Spectrum loading screen for an example of how this can be done).

Which brings us nicely to the next part of this guide: the many PC utilities in existence to support and enhance your Spectrum experience. That's what we'll explore next issue.

side projects keep me busy. A great example is the copyrights project. It's seriously cool to be able to talk to the actual programmers of Speccy games. I'd never have guessed that I could even directly speak with Richard Darling of Codemasters, for example. Amazing!

Not forgetting of course all of these great people that help out. I wouldn't be able to let WoS grow so fast without the vast amount of uploads and database corrections. And let's not forget my dear friendswho help maintain projects and give advice (such as Andy Barker, Steve Brown, Phil Kendall, Lee Tonks and Juan Pablo López-Grao). This joint-effort feeling is what keeps it interesting every day.

So at what point did you begin to visualise the enormity of WOS today? When did the site stop becoming just another site you could download games from and start becoming (in your plans) *the* resource on the Internet for Spectrum downloads?

I've had this vision ever from the start, pretty much wanting to bring anything and everything on-line about the Spectrum era. I always wanted to provide as much information as possible.

If you look at the comp.sys.sinclair message I provided earlier, and the following ones, I started saying that from the first day I hosted downloads :-)

There wasn't a proper archive site at that time; NVG was highly disorganised (sorry, Lee) and I wanted to take over the job. After all, I had been cataloging games forever (since 1986) and had a relatively big database already - not by today's standards, only some 5000 entries, but I thought it was huge at the time anyway.

Games help pages and magazine references and reviews were on my to-do list as well. I was pleasantly surprised one day, to see that other folks were working on magazine sites, such as the legendary YS, Crash and later SU sites. Especially Nick (The YS Rock 'n' Roll Years) became a very good friend. We inter-linked our sites as much as possible, thus providing the visitors with the wealth of information. Another superb project is from Jim Grimwood: SPOT*ON (its name was chosen wisely), the magazine index database. Without this enormous database, WoS wouldn't have had so much detailed information on programs in the Sinclair Infoseek search engine. Lastly, there's the thrilling new site The Tipshop, from Nick Humphries and Gerard Sweeney, which aims at helping out gamers with hints, tips, cheats and complete walkthroughs.

I've been lucky in determining who to work with. I've seen plenty of sites that started and most of them have faded away after a couple of months. Only very few are run by serious Spectrum enthusiasts and these are the ones that continue to update to this day. People such as Ronald Raaijen also provided me with tons of database information (in fact, the current MIA list was created mostly when checking his database!), not forgetting the huge amount of corrections I got from the actual game authors I contacted over time for the copyrights project.

Of course, having the financial possibility to host a site such as WoS and the time to write all necessary (web)tools oneself is also a big plus :-)

You mentioned earlier the thrill of communicating with original program authors - how hard has it been to track these people down and what sort of responses have you received from them?

Finding them is very hard, as many don't have an e-mail address or don't have their address published on the web. When I have lot of time to spare, I tend to just enter names from the WoS database into various search engine and see what pops up. As some names are relatively common, the result can be hundreds of links, which I then check. A tedious job indeed!

Luckily, these days they more often find me, through WoS :-)

So far, the response has been

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HARDWARE:

3 inch 180K disc drive for +3. Reconditioned with 3 months warranty £10 each. These drives can be supplied with cream coloured facias in place of the black facias if wanted -- just ask.

Belts for the 3 inch drive £1 each. New. Loads available. (Just send a S.A.E. with order to cover postage -- correct for up to 20 belts).

Monitor lead to convert +3, +2 and +2A to use an Amstrad CTM644 colour monitor. £4 each.

3 INCH DISCS:

3 inch Blank discs: Second-hand good quality Amsoft or Maxell only supplied. All have been reformatted, verfied and relabelled. 80 pence each or £7-50 for ten. Larger quantities available 100 for £65, 1000 for £450.

Sometimes available new 3 inch discs at £1 each, please ask.

JOHN R P KING

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We're not imagining it; Andrew Owen is really here. And then some. Over the last few months, both of Andrew's two main projects - SE BASIC and the ZX Spectrum SE - have taken gigantic leaps in their development. Next issue we'll be looking at SE BASIC in detail; for now it's the turn of the ZXSE, the hardware project of the two. In between all his work on SE BASIC, Andrew has taken the time to answer a few of my questions about his new Super Spectrum; this is what he's had to say.

The ZX Spectrum SE

The ZX Spectrum SE. Just so we're clear, this is completely different from SE BASIC (see news section) insofar as it is a hardware rather than software (or firmware, if you will) project - but I take it the ZX Spectrum SE is intended as a host for SE BASIC? Actually, I have to confess that I initially confused the two projects as being one and the same thing (an ordinary Spectrum running SE BASIC would functionally be an extended Spectrum because of its new capabilities, therefore I - erroneously - took it that 'ZX Spectrum SE' was just another name for SE BASIC). Tell us about the ZX Spectrum SE - is this the project you originally codenamed 'Chloe'?

Well, your confusion is understandable since the ZX Spectrum SE, which is still codenamed 'Chloe' after ZeDex82's daughter (who is now 2.5 years old) was going to be the name of the ROMs I was working on. Turning it into a hardware project was a later idea. But since I was having difficulties in getting any support it was going to be an emulated hardware project, then I made contact with a Polish genius called Jarek Adamski who was able to realise many of my ideas for a new hardware platform. At that point the hardware and software sides were separated again. To be clear on the naming, the SE in ZX Spectrum SE and SE Basic mean two very different things. The ZX Spectrum SE is so called because I thought to myself; what if Amstrad had never bought Sinclair, and Sinclair had followed Apple's naming strategy. First there was the Mac, then the Mac Plus, then the Mac SE. Sinclair had already made a ZX Spectrum and a ZX Spectrum Plus, so a ZX Spectrum SE would have been the next logical step. So in answer to those who ask me what the SE in ZX Spectrum SE stands for, all I can say is: I don't know - ask Apple! You are right that the new hardware was originally intended as a platform for the new Basic, but when it became clear that the hardware would be finished first, I needed a different name for the Basic. Although the original Basic is often referred to as Spectrum Basic, its proper name is Sinclair Basic. And it's not the first version. That was Sinclair Integer Basic on the ZX80, which was followed by Sinclair Floating Point Basic on the ZX81. Again, I thought to myself, what would the next version have been called if standard naming strategies were followed and of course the answer was Sinclair Extended Basic. Now I don't own any rights on the name Sinclair, so I couldn't exercise any

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specification and all you'd be missing would be the Timex video modes and the 128K of sideways RAM. Jarek has a circuit for the 48K machine that will increase the RAM to 256, it's just paged differently.

And the ZXSE can access this 256k of RAM? I think that, for most people, upgrading a standard 48k Spectrum is likely to be the most viable route to a ZXSE, even if it means sacrificing the extra video modes. I don't know about anyone else, but a rubber keyed 256k Spectrum just by itself sounds fantastic to me.

Well, the RAMdisk drivers for SE Basic will be in software rather than as a direct part of the ROM so it should be easy to add a driver to support the extra RAM of the ZXSE, Jarek's 256K upgrade, or the standard 128K. Of course someone has to write the driver, but if no-one else does it I'll get around to it in the end.

You mention on your site that you would like to see the SE supported by emulators - any sign of this happening?

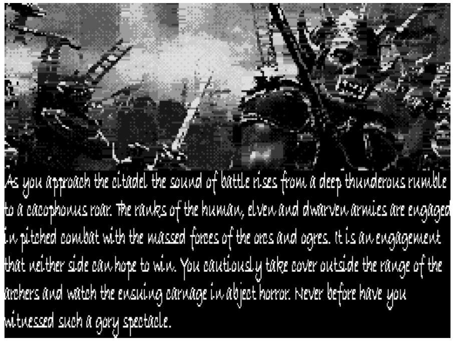
Gunter Woijk was going to add ZX Spectrum SE support to his zxsp emulator. There's even a 'Chloe' option on the menu in the version for Mac OS 9. However, all that does is use a different set of ROMs. It's a start though. I didn't think Timex emulation was ever going to take off, but ever since I persuaded Chris Cowley to add a TC2048 mode to vbSpec a lot more emulators are supporting it. From an emulator author's point of view, if your emulator already supports the Spectrum 128 and the Timex TC2048, then ZX Spectrum SE emulation isn't very complicated to add.

Stop press: ZX Spectrum SE emulation is pencilled in for possible inclusion in MacFuse although it won't be in the first public release.

I guess it's worth pointing out here that you and Chris have both written demos showing off the TC2048's high colour mode (available from the vbSpec site). Do you have any plans to develop any software for the ZXSE (games, applications, etc) now that it's complete?

Of course. SE Basic is taking up a lot of my time but the first ZXSE application is already written. It's a Timex 2068 emulator, written with help from Alvin Albrecht. It uses the sideways RAM to install a modified version of the TS2068 ROMs. It even has a certain amount of support for Timex cartridges, although the only one I've tested so far is OS64. I also have plans for a psuedo-multi-taksing program which will allow you to have three 48K programs in memory at once and switch between them using the NMI button. That's a little way off yet, but it's simple in theory. On the games front I really want to do a scrolling shoot-em up using hi-colour mode. However, I don't know if it the screen can be updated quickly enough to make it playable. I do have a game idea for hi-colour mode that isn't dependent on frequent updates, but I can't really go into it now. The other idea I have is for a graphic adventure game. It's possible to switch resolutions mid-display on the Timex hardware, so the idea is that part of the screen will be in hi-colour mode, and the other part will be in hi-res mode, with the switch timed via the maskable interrupt. The text will be 80 or 85 columns, and the pictures will be 24-bit BMPs rendered to hi-colour by LCD's excellent BMP2SCR program.

Here's a screenshot of split-screen mode, although it relies on having the colour turned down:



As you approach the citadel the sound of battle rises from a deep thunderous rumble to a cacophonus roar. The ranks of the human, elven and dwarven armies are engaged in pitched combat with the massed forces of the orcs and ogres. It is an engagement that neither side can hope to win. You cautiously take cover outside the range of the archers and watch the ensuing carnage in abject horror. Never before have you witnessed such a gory spectacle.

ZXF 2003

www.zxf.cjb.net

January

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